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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,824	09/30/2003	Balu Balakrishnan	005510.P077	6654

7590 06/14/2005  
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EXAMINER

WELLS, KENNETH B

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/675,824

**Applicant(s)**

BALAKRISHNAN, BALU

**Examiner**

Kenneth B. Wells

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 13-16, 18, 23, 28, 30-47, 51, 53, 57 and 69-73 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 48-50, 52, 54-56 and 58-68 is/are allowed.
- 6) ☒ Claim(s) 1, 7-12, 17, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-6, 21, 22, 24-27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Applicant's withdrawal of claims 13-16, 18, 23, 28, 30-47, 51, 53, 57 and 69-73 is acknowledged. An action on the merits for the remaining claims follows.

2. The drawings are objected to because Figs. 1 and 2 need "prior art" labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office

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action. The objection to the drawings will not be held in abeyance.

3. Claims 1, 4, 10, 17 and 49 are objected to because of the following informalities: in claim 1, it cannot be determined if the "load" is part of the "circuit" set forth on line 1 (or whether it is just the intended use of the invention). In claim 4, there is no antecedent basis for "a second threshold" because no first threshold is set forth in claim 1. In claim 10, it makes no sense to recite that the high side switch is included within the control circuit (by way of claim 9) because claim 1 already recites the high side switch and control circuit as two separate elements, i.e., claims 1 and 10 are internally inconsistent with each other. In claim 17, it appears that "off switch" on line 2 should be changed to --switch off--. In claim 49, "a delay time" on line 2 is unclear as well, i.e., delay time *following what point in time?* Note, for example, instant claim 6, for the proper way of reciting this. Appropriate correction is required.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sziebert.

As to claim 1, note Fig. 3, where the recited "high side switch" reads on FET 72; the recited "load" reads on the combination of elements 70 and 80; and the recited "control circuit" reads on the combination of elements 82 and 89 (note that the on/off control output of amplifier 82 is a function of the voltage across the high side switch). As to claim 17, the recited operation is inherent in any high side switch, control circuit combination. As to claim 19, the positive and negative input terminals are where  $V_m$  and ground are respectively received. As to claim 20, the low side switch is FET 76.

5. Claims 1, 17, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Dequina et al.

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As to claim 1, note Fig. 1, where the recited "high side switch" reads on FET 3; the recited "load" reads on load element 9; and the recited "control circuit" reads on the combination of elements 1 and 2 (note that the on/off control output of this control circuitry is a function of the voltage across the high side switch). As to claim 17, the recited operation is inherent in any high side switch, control circuit combination. As to claim 19, the positive and negative input terminals are where VIN and ground are respectively received. As to claim 20, the low side switch is FET 4.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Sziebert or Dequina et al.

The limitations of these claims, though not disclosed by the above-noted references, would have been obvious to one of ordinary skill in the art because they merely recite well-known

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load structures and well-known intended use (i.e., claim 11) of the claimed invention. Thus, these claims do not define patentably over Sziebert or Dequina et al.

7. Claims 48-50, 52, 54-56 and 58-68 are allowed.

Claims 2-6, 21, 22, 24-27 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

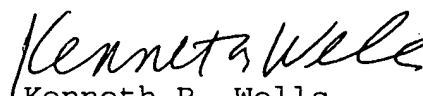
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan, can be reached at (571)272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth B. Wells  
Primary Examiner  
Art Unit 2816

June 10, 2005